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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,865	04/15/2002	Pentti Rautainen	FORSAL-28	8802

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EXAMINER

HALPERN, MARK

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 05/19/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/019,865		RAUTIAINEN, PENTTI	
	Examiner		Art Unit	
	Mark Halpern		1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 31-64 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 31-64 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> . | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

- 1) Acknowledgement is made of preliminary Amendment received 4/15/2002.

Applicant cancels claims 1-30, and offers new claims 31-64, for consideration.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- 2) Claims 31-64, are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahonen (6,413,371) in view of Wurster (5,916,420).

Claims 31, 33, 40, 42-43, 50-51, 53-54, 56, 59, 63: Ahonen discloses a multi-layer headbox 100 feeding stock into a gap formed between former rolls 210 and 220, forming a paper web W between wires 215 and 216. The stock is formed using short circulation system (col. 6, lines 1-13, and Figure 3). Water is drained from the forming web over drain devices 230. The web then proceeds to press section 300, which comprises presses 350 and 360. Each of the presses 350 and 360 has been formed as a shoe press, thus the web is in an extended nip press between press rolls 310 and 311, and 320 and 321. The web then travels to the dryer section 400. The web W runs on support of lower fabric 451 over the impingement drying equipment 450 into cylinder dryer groups R_1 to R_N . The web supported on wires then enters coating section 500,

Art Unit: 1731

followed by contact free airborne-web dryer 590 to after-dryer section 600, a calender section 700, wherein the nip loads are regulated, and a reel-up section 800 (Ahonen, col. 4, line 46 to col. 6, line 13, and Figures 1-3). The Ahonen system fails to disclose pre coating of both sides of the web at the same time. Wurster discloses a process of making thin printing paper wherein precalendering and precoating is performed simultaneously on both sides of the paper web by a SymSizer unit prior to coating (Wurster, col. 6, lines 46-62). SymSizer is well known in the art as a precalendering and precoating surface sizing system as recited by the Applicant on page 9 of the present Specification. It would have been obvious, to one skilled in the art at the time the invention was made, to combine the teachings of Ahonen and Wurster, because such a combination would reduce the number of processing equipment and simplify the process in the design of Ahonen.

Claims 32, 48: Ahonen discloses stock consistency adjustment by controlling flows of the stock, retention agents, fillers and additives with pumps from three flows at points 115, 116 and 117, before the stock enters the headbox. In this way the desired layers of compositions are produced in the z-direction of the web (col. 6, lines 1-13).

Claims 34, 57: upper fabric 317 and lower fabrics 316, 318, are used in the press nips in the press section (col. 5, lines 15-25).

Claims 35, 45-47, 62, 64: the use of coater device of Wurster includes the sizing and coating application in a compact action, thus precoating and precalendering are not required due to the use of coater device of Wurster.

Art Unit: 1731

Claim 36: the web W runs over impingement drying equipment 450 into cylinder dryer groups R_1 to R_N . It is well known in the art that the impingement drying is included to provide for quicker moisture removal from the moving web. The blowing of air over the web reduces the moisture boundary layer over the web, which in turn speeds up the drying process.

Claims 37, 39: after coating drying is profiled (Ahonen, col. 5, lines 45-54, col. 6, lines 42-67).

Claim 38, 58: a blade coater is disclosed (Ahonen, col. 6, lines 42-50).

Claims 41, 61: moistening device 650 using steam or water mist is used to control curl (col. 5, lines 50-55).

Claims 44, 60: after coating the web is passed to contact free airborne-web dryer 590 followed by after-dryer section 600 contact drying. It would have been obvious, to one skilled in the art at the time the invention was made, that the principal drying at this stage be carried out by contact free drying because contact free drying would ensure the quality of the web coating.

Claims 49, 52: the paper formed is fine paper used for color printing (Ahonen, col. 2, lines 20-30).

Claims 50, 55: the former is a gap former 250 (col. 5, line 12).

Conclusion

3) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Halpern whose telephone number is 703-305-4522. The examiner can normally be reached on Mon-Fri, (9:00-5:30).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 703-308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7718 for regular communications and 703-305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.

MH

Mark Halpern
Patent Examiner
Art Unit 1731

May 14, 2003


STEVEN P. GRIFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700